SHIPRAMA CONSULTING ENGINEERS PRIVATE LIMITED
(MECHANICAL TESTING LABORATORY DIVISION)
ISO 9001:2015 Certified Company

TEST REPORT ON BITUMEN CONTENT AND GRADATION FOR DENSE GRADED BITUMINOUS MACADAM

Date.	:20-3-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Beliahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara in Ward no: 06 Bytarayanapura Sub Division.
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
Location	: Bhagath Enclave,
Source of Sample	: At Site
Technical Reference	: IS 2720 (Part-4)- 1985 RA 2015, AASHTO T 164 & AASHTO T 30 & MORTH
Material description	: Dense Graded Bituminous Macadam
Date of Reciept of Sample	:20-3-2023
Date of testing	:20-3-2023

TEST RESULTS

BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	476.5	478
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	23.5	22.00
7. Bitumen content in %	4.70	4.40
8. Average	4.55	

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ಬೈರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-26

1048, 8th Block Extension ,Gangubai Hangal Road, Sir M. Vishveshwaraiah Layout, Kodigehalli, Sidadakonenahalli
Bengaluru-560091.Mob:9886212878 Ph.: 080 29554444 | Email: shiprama888@gmail.com |

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Total Wt. of Aggregates in gms 476.5

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 500-10
37.5	0	0	0	100	100
26.5	32.5	32.5	6.82	93.18	90 - 100
19	51.2	83.7	17.57	82.43	71 - 95
13.2	36.8	120.5	25.29	74.71	56 - 80
4.75	125.2	245.7	51.56	48.44	38 - 54
2.36	68.5	314.2	65.94	34.06	28 - 42
0.3	85.9	400.1	83.97	16.03	7 - 21
0.075	45.3	445.4	93.47	6.53	2 - 8

Total Wt. of Aggregates in gms 478

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 500-10
37.5	0	0	0	100	100
26.5	31.4	31.4	6.57	93.43	90 - 100
19	58.6	90	18.83	81.17	71 - 95
13.2	36.2	126.2	26.40	73.60	56 - 80
4.75	129.5	255.7	53.49	46.51	38 - 54
2.36	62.9	318.6	66.65	33.35	28 - 42
0.3	82.4	401	83.89	16.11	7 - 21
0.075	55.5	456.5	95.50	4.50	2 - 8

Notes:-

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ರಾಜಾಜಿನಗರ ಉಪ ವಿಭಾಗ
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TEST REPORT ON BITUMEN CONTENT AND GRADATION FOR DENSE GRADED BITUMINOUS MACADAM

Date.	:24-3-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Beliahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara in Ward no: 06 Bytarayanapura Sub Division.
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
Location	: Royal Enclave,
Source of Sample	: At Site
Technical Reference	: IS 2720 (Part-4)- 1985 RA 2015, AASHTO T 164 & AASHTO T 30 & MORTH
Material description	: Dense Graded Bituminous Macadam
Date of Reciept of Sampie	:24-3-2023
Date of testing	:24-3-2023

TEST RESULTS

BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477	476.5
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	23	23.50
7. Bitumen content in %	4.60	4.70
8. Average	**4.65**	

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ಬೆಂಗಳೂರು-26

1048, 8th Block Extension ,Gangubai Hangal Road, Sir M. Vishveshwaraiah Layout, Near Gidadakonenahalli
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TEST REPORT ON BITUMEN CONTENT AND GRADATION FOR DENSE GRADED BITUMINOUS MACADAM

Date.	:24-3-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara in Ward no: 06 Bytarayanapura Sub Division.
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
Location	: Royal Enclave,
Source of Sample	: At Site
Technical Reference	: IS 2720 (Part-4)- 1985 RA 2015, AASHTO T 164 & AASHTO T 30 & MORTH
Material description	: Dense Graded Bituminous Macadam
Date of Reciept of Sample	:24-3-2023
Date of testing	:24-3-2023

TEST RESULTS

BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477	476.5
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	23	23.50
7. Bitumen content in %	4.60	4.70
8. Average	4.65	

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1048, 8th Block Extension ,Gangubai Hangal Road, Sir M. Vishveshwaraiah Layout, Near Gidadakonenahalli
Bengaluru-560091.Mob:9886212878 Ph.: 080 29554444 | Email: shiprama888@gmail.com |

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Total Wt. of Aggregates in gms 477

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 500-10
37.5	0	0	0	100	100
26.5	31.5	31.5	6.60	93.40	90 - 100
19	52.2	83.7	17.55	82.45	71 - 95
13.2	35.9	119.6	25.07	74.93	56 - 80
4.75	125.6	245.2	51.40	48.60	38 - 54
2.36	68.4	313.6	65.74	34.26	28 - 42
0.3	85.6	399.2	83.69	16.31	7 - 21
0.075	48.4	447.6	93.84	6.16	2 - 8

Total Wt. of Aggregates in gms 476.5

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 500-10
37.5	0	0	0	100	100
26.5	32.6	32.6	6.84	93.16	90 - 100
19	59.6	92.2	19.35	80.65	71 - 95
13.2	36.5	128.7	27.01	72.99	56 - 80
4.75	129.8	258.5	54.25	45.75	38 - 54
2.36	64.5	323	67.79	32.21	28 - 42
0.3	83.5	406.5	85.31	14.69	7 - 21
0.075	54.4	460.9	96.73	3.27	2 - 8

Notes:-

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ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-26

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TEST REPORT ON BITUMEN CONTENT AND GRADATION FOR DENSE GRADED BITUMINOUS MACADAM

Date.	:25-3-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara in Ward no: 06 Bytarayanapura Sub Division.
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
Location	: Manjunath Layout
Source of Sample	: At Site
Technical Reference	: IS 2720 (Part-4)- 1985 RA 2015, AASHTO T 164 & AASHTO T 30 & MORTH
Material description	: Dense Graded Bituminous Macadam
Date of Reciept of Sample	:25-3-2023
Date of testing	:25-3-2023

TEST RESULTS

BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	476	476.5
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	24	23.50
7. Bitumen content in %	4.80	4.70
8. Average	4.75	

SHIPRAMA Consulting Engineers Pvt. Ltd. Bangalore

1048, 8th Block Extension ,Gangubai Hangal Road, Sir M. Vishveshwaraiah Layout, Near Gidadakonenahalli
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Total Wt. of Aggregates in gms 476

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 500-10
37.5	0	0	0	100	100
26.5	31.5	31.5	6.62	93.38	90 - 100
19	52.2	83.7	17.58	82.42	71 - 95
13.2	35.9	119.6	25.13	74.87	56 - 80
4.75	125.6	245.2	51.51	48.49	38 - 54
2.36	68.4	313.6	65.88	34.12	28 - 42
0.3	85.6	399.2	83.87	16.13	7 - 21
0.075	48.4	447.6	94.03	5.97	2 - 8

Total Wt. of Aggregates in gms 476.5

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 500-10
37.5	0	0	0	100	100
26.5	32.6	32.6	6.84	93.16	90 - 100
19	59.6	92.2	19.35	80.65	71 - 95
13.2	36.5	128.7	27.01	72.99	56 - 80
4.75	129.8	258.5	54.25	45.75	38 - 54
2.36	64.5	323	67.79	32.21	28 - 42
0.3	83.5	406.5	85.31	14.69	7 - 21
0.075	54.4	460.9	96.73	3.27	2 - 8

Notes:-

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ತಾಂತ್ರಿಕಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-24

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SHIPRAMA CONSULTING ENGINEERS PRIVATE LIMITED
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TEST REPORT ON GRADATION

Date.	:19-3-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shirdi Sai Nagara in Ward no: 06 Bytarayanapura Sub Division.
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
Location	: Bhagath Enclave,
Source of Sample	: At Site
Technical Reference	: IS 2720 (Part-4)- 1985 RA 2016, MORTH Table 500-10
Material description	: Dense Graded Bituminous Macadam
Date of Reciept of Sample	:19-3-2023
Date of testing	:19-3-2023

TEST RESULTS

Total Wt. of Aggregates in gms 13124

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 500-10
37.5	0	0	0	100	100
26.5	495	495	3.77	96.23	90 - 100
19	2371	2866	21.84	78.16	71 - 95
13.2	2570	5436	41.42	58.58	56 - 80
4.75	2648	8084	61.60	38.40	38 - 54
2.36	1384	9468	72.14	27.86	28 - 42
0.3	2391	11859	90.36	9.64	7 - 21
0.075	635	12494	95.20	4.80	2 - 8

Remarks: The above tested sample satisfies MORTH Specifications as per Table 500-10, Grading II

Notes:-

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ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರ

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Bengaluru-560091.Mob:9886212878 Ph.: 080 29554444 | Email: shiprama888@gmail.com |

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TEST REPORT ON GRADATION

Date.	:23-3-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shirdi Sai Nagara in Ward no: 06 Bytarayanapura Sub Division.
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
Location	: Royal Enclave,
Source of Sample	: At Site
Technical Reference	: IS 2720 (Part-4)- 1985 RA 2016, MORTH Table 500-10
Material description	: Dense Graded Bituminous Macadam
Date of Reciept of Sample	:23-3-2023
Date of testing	:23-3-2023

TEST RESULTS

Total Wt. of Aggregates in gms 13124

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 500-10
37.5	0	0	0	100	100
26.5	491	491	3.74	96.26	90 - 100
19	2351	2842	21.65	78.35	71 - 95
13.2	2571	5413	41.25	58.75	56 - 80
4.75	2640	8053	61.36	38.64	38 - 54
2.36	1389	9442	71.94	28.06	28 - 42
0.3	2392	11834	90.17	9.83	7 - 21
0.075	647	12481	95.10	4.90	2 - 8

Remarks: The above tested sample satisfies MORTH Specifications as per Table 500-10, Grading II

Notes:-

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ಬಿಬಿಎಂಪಿ ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಬೆಂಗಳೂರು-24

1048, 8th Block Extension ,Gangubai Hangal Road, Sir M. Vishveshwaraiah Layout, Near Gidadakonenahalli
Bengaluru-560091.Mob:9886212878 Ph.: 080 29554444 | Email: shiprama88@gmail.com |

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(MECHANICAL TESTING LABORATORY DIVISION)
ISO 9001:2015 Certified Company

TEST REPORT ON GRADATION

Date.	:24-3-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara in Ward no: 06 Bytarayanapura Sub Division.
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
Location	: Manjunath Layout
Source of Sample	: At Site
Technical Reference	: IS 2720 (Part-4)- 1985 RA 2016, MORTH Table 500-10
Material description	: Dense Graded Bituminous Macadam
Date of Reciept of Sample	:24-3-2023
Date of testing	:24-3-2023

TEST RESULTS

Total Wt. of Aggregates in gms 13124

Sieve Size in mm	Weight retained (gms)	Cumulative weight retained (gms)	Percentage Cumulative weight retained (%)	Percentage Passing (%)	Specified Limits as per MORTH Table 500-10
37.5	0	0	0	100	100
26.5	494	494	3.76	96.24	90 - 100
19	2355	2849	21.71	78.29	71 - 95
13.2	2571	5420	41.30	58.70	56 - 80
4.75	2653	8073	61.51	38.49	38 - 54
2.36	1389	9462	72.10	27.90	28 - 42
0.3	2389	11851	90.30	9.70	7 - 21
0.075	648	12499	95.24	4.76	2 - 8

Remarks: The above tested sample satisfies MORTH Specifications as per Table 500-10, Grading II

Notes:-

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*** End of the Report ***

1048, 8th Block Extension, Gangubai Hangal Road, Sir M. Vishveshwaraiah Layout, Near Gidadakonenahalli
Bengaluru-560091.Mob:9886212878 Ph.: 080 29554444 | Email: shipramia888@gmail.com |

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(MECHANICAL TESTING LABORATORY DIVISION)
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TEST REPORT ON AGGREGATE IMPACT VALUE

Date.	19-03-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Shankara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara in Ward no: 06 Bytarayanapura Sub
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
PMC Name	: Shiprama Consulting Engineers
Technical Reference	: IS 2386 (Part-4)- 1963 RA 2016, MORTH table 500-10
Material description	: Dense Graded Bituminous Macadam
Date of Reciept of Sample	19-03-2023
Date of testing	19-03-2023

TEST RESULTS

Sl No.	Details	Trial No.			Average
		1	2	3	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	386	387	385	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	93	91	92	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	293	296	293	
4	Aggregate Impact value = percent fines	24.09	23.51	23.90	
	100* (W_2/W_1)%				23.83

Remarks : Maximum allowable Aggregate Impact value for Dense Graded Bituminous Macadam is 27%

Notes:-

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TEST REPORT ON AGGREGATE IMPACT VALUE

Date.	:23-03-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Shankara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara in Ward no: 06 Bytarayanapura Sub
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
PMC Name	: Shiprama Consulting Engineers
Technical Reference	: IS 2386 (Part-4)- 1963 RA 2016, MORTH table 500-10
Material description	: Dense Graded Bituminous Macadam
Date of Reciept of Sample	:23-03-2023
Date of testing	:23-03-2023

TEST RESULTS

Sl No.	Details	Trial No.			Average
		1	2	3	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	388	387	385	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	94	93	92	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	294	294	293	
4	Aggregate Impact value = percent fines	24.23	24.03	23.90	
	100* (W_2/W_1)%				**24.05**

Remarks : Maximum allowable Aggregate Impact value for Dense Graded Bituminous Macadam is 27%

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TEST REPORT ON AGGREGATE IMPACT VALUE

Date.	:24-03-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Shankara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara in Ward no: 06 Bytarayanapura Sub
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
PMC Name	: Shiprama Consulting Engineers
Technical Reference	: IS 2386 (Part-4)- 1963 RA 2016, MORTH table 500-10
Material description	: Dense Graded Bituminous Macadam
Date of Reciept of Sample	:24-03-2023
Date of testing	:24-03-2023

TEST RESULTS

Sl No.	Details	Trial No.			Average
		1	2	3	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	389	386	387	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	92	93	92	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	297	293	295	
4	Aggregate Impact value = percent fines	23.65	24.09	23.77	
	100* (W_2/W_1)%				23.84

Remarks : Maximum allowable Aggregate Impact value for Dense Graded Bituminous Macadam is 27%

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DETERMINATION OF RATE OF SPREAD PRIME COAT

Date. :20-3-2023

***Client Name** : Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92

Contractor Name : M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043

Project Name : Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase. Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and

Letter Reference :BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022

Location : Bhagath Enclave,

PMC Name : Shiprama Consulting Engineers

Date of testing :20-3-2023

Determination	Unit	Test No	
		1	2
Size of Plate (mxm)	mt	0.45 X 0.45	0.45 X 0.45
Area of Plate (a)	Sq.m	0.2023	0.2023
Intial Wt of empty Plate (b)	Kg	1.628	1.629
Final weight of plate after application of prime /Tack Coat (c)	Kg	1.768	1.768
Weight of Prime/Tack Coat (d=c-b)	Kg	0.1400	0.1390
Rate of spread of prime /tack coat	kg/Sq.m	0.692	0.687
Average	kg/Sq.m	0.690	
Specified Limit	kg/Sq.m	0.60 Kg/sq.m	

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DETERMINATION OF RATE OF SPREAD PRIME COAT

Date. :24-3-2023

***Client Name** : Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92

Contractor Name : M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043

Project Name : Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase. Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and

Letter Reference :BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022

Location : Royal Enclave,

PMC Name : Shiprama Consulting Engineers

Date of testing :24-3-2023

		1	2
Size of Plate (mxm)	mt	0.45 X 0.45	0.45 X 0.45
Area of Plate (a)	Sq.m	0.2025	0.2025
Intial Wt of empty Plate (b)	Kg	1.629	1.629
Final weight of plate after application of prime /Tack Coat (c)	Kg	1.768	1.768
Weight of Prime/Tack Coat (d=c-b)	Kg	0.1390	0.1390
Rate of spread of prime /tack coat	kg/Sq.m	0.686	0.686
Average	kg/Sq.m	0.686	
Specified Limit	kg/Sq.m	0.60 Kg/sq.m	

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DETERMINATION OF RATE OF SPREAD PRIME COAT

Date. :25-3-2023

***Client Name** : Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92

Contractor Name : M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043

Project Name : Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and

Letter Reference :BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022

Location : Manjunath Layout

PMC Name : Shiprama Consulting Engineers

Date of testing :25-3-2023

		1	2
Size of Plate (mxm)	mt	0.45 X 0.45	0.45 X 0.45
Area of Plate (a)	Sq.m	0.2025	0.2025
Intial Wt of empty Plate (b)	Kg	1.629	1.629
Final weight of plate after application of prime /Tack Coat (c)	Kg	1.765	1.768
Weight of Prime/Tack Coat (d=c-b)	Kg	0.1360	0.1390
Rate of spread of prime /tack coat	kg/Sq.m	0.672	0.686
Average	kg/Sq.m	0.679	
Specified Limit	kg/Sq.m	0.60 Kg/sq.m	

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TEST REPORT ON BITUMEN

Date.	:19-3-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara in Ward no: 06 Bytarayanapura Sub
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
PMC Name	: Shiprama Consulting Engineers
Technical Reference	: IS 73 -2013
Material description	: VG 30 Bitumen
Date of Reciept of Sample	:19-3-2023
Date of testing	:19-3-2023

TEST RESULTS

The results of the tests conducted on the bitumen sample using for Dense Bituminous Macadam

Sl.No	Description	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	57	Min 45
2	Softening point, ^{0}C	49	Min. 47
3	Ductility at 27^{0}C, cm	> 100	Min. 40
4	Flash Point, ^{0}C	361	Min. 220

Notes:-

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TEST REPORT ON BITUMEN

Date.	:19-3-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara in Ward no: 06 Bytarayanapura Sub
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
PMC Name	: Shiprama Consulting Engineers
Technical Reference	: IS 73 -2013
Material description	: VG 30 Bitumen
Date of Reciept of Sample	:19-3-2023
Date of testing	:19-3-2023

TEST RESULTS

The results of the tests conducted on the bitumen sample using for Dense Bituminous Macadam

Sl.No	Description	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	57	Min 45
2	Softening point, ^{0}C	49	Min. 47
3	Ductility at 27^{0}C, cm	> 100	Min. 40
4	Flash Point, ^{0}C	361	Min. 220

Notes:-

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TEST REPORT ON BITUMEN

Date.	:23-3-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara in Ward no: 06 Bytarayanapura Sub
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
PMC Name	: Shiprama Consulting Engineers
Technical Reference	: IS 73 -2013
Material description	: VG 30 Bitumen
Date of Reciept of Sample	:23-3-2023
Date of testing	:23-3-2023

TEST RESULTS

The results of the tests conducted on the bitumen sample using for Dense Bituminous Macadam

Sl.No	Description	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	58	Min 45
2	Softening point, ^{0}C	47	Min. 47
3	Ductility at 27^{0}C, cm	> 100	Min. 40
4	Flash Point, ^{0}C	364	Min. 220

Notes:-

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TEST REPORT ON BITUMEN

Date.	:24-3-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara in Ward no: 06 Bytarayanapura Sub
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
PMC Name	: Shiprama Consulting Engineers
Technical Reference	: IS 73 -2013
Material description	: VG 30 Bitumen
Date of Reciept of Sample	:24-3-2023
Date of testing	:24-3-2023

TEST RESULTS

The results of the tests conducted on the bitumen sample using for Dense Bituminous Macadam

Sl.No	Description	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	59	Min 45
2	Softening point, ^{0}C	48	Min. 47
3	Ductility at 27^{0}C, cm	> 100	Min. 40
4	Flash Point, ^{0}C	363	Min. 220

Notes:-

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TEST REPORT ON FLAKINESS & ELONGATION

Date.	:19-3-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara in Ward no: 06 Bytarayanapura Sub Division
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
PMC Name	: Shiprama Consulting Engineers
Technical Reference	: IS:2386(part 1)-1963 RA 2016, MORTH Table 400-13
Material description	: Dense graded Bituminous Macadam
Date of Reciept of Sample	:19-3-2023
Date of testing	:19-3-2023

TEST RESULTS

Sl. No.	Particulars	Test Results	Standards as per Specifications As per MORTH Table 400-13
1	Flakiness Index	16.20%	Maximum allowable Flakiness & Elongat Dense graded Bituminous Macadam is 35%
2	Elongation Index	11.35%	
	Combined Flakiness & Elongation	**27.55%**	

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TEST REPORT ON FLAKINESS & ELONGATION

Date.	:23-3-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara in Ward no: 06 Bytarayanapura Sub Division
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
PMC Name	: Shiprama Consulting Engineers
Technical Reference	: IS:2386(part 1)-1963 RA 2016, MORTH Table 400-13
Material description	: Dense graded Bituminous Macadam
Date of Reciept of Sample	:23-3-2023
Date of testing	:23-3-2023

TEST RESULTS

Sl. No.	Particulars	Test Results	Standards as per Specifications As per MORTH Table 400-13
1	Flakiness Index	17.20%	Maximum allowable Flakiness & Elongat Dense graded Bituminous Macadam is 35%
2	Elongation Index	11.40%	
	Combined Flakiness & Elongation	**28.60%**	

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ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-26

1048, 8th Block Extension ,Gangubai Hangal Road, Sir M. Vishveshwaraiah Layout, Near Gidadakonenahalli
Bengaluru-560091.Mob:9886212878 Ph.: 080 29554444 | Email: shiprama888@gmail.com |

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TEST REPORT ON FLAKINESS & ELONGATION

Date.	:24-3-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara in Ward no: 06 Bytarayanapura Sub Division.
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
PMC Name	: Shiprama Consulting Engineers
Technical Reference	: IS:2386(part 1)-1963 RA 2016, MORTH Table 400-13
Material description	: Dense graded Bituminous Macadam
Date of Reciept of Sample	:24-3-2023
Date of testing	:24-3-2023

TEST RESULTS

Sl. No.	Particulars	Test Results	Standards as per Specifications As per MORTH Table 400-13
1	Flakiness Index	18.20%	Maximum allowable Flakiness & Elongat Dense graded Bituminous Macadam is 35%
2	Elongation Index	12.50%	
	Combined Flakiness & Elongation	**30.70%**	

Notes:-

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TEST REPORT ON SPECIFIC GRAVITY AND WATER ABSORPTION

Date. :19-3-2023

Client Name : Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92

***Contractor Name** : M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043

Project Name : Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara

Letter Reference :BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022

PMC Name : Shiprama Consulting Engineers

Technical Reference : IS 2386 (Part-4)- 1963 RA 2016, MORTH Table 500-10

Material description : Dense Graded Bituminous Macadam

Date of Reciept of Sample :19-3-2023

Date of testing :19-3-2023

TEST RESULTS

Total Wt. of Sample = 2000 gms

Sl. No.	Description	Notation	Test Result	
			Trail 1	Trail 2
1	Weight of Aggregate Suspended in water with the Basket (in gms)	A1	3721.0	3722.0
2	Weight of Empty Basket suspended in Water (in gms)	A2	2475.0	2475.0
3	Weight of Saturarted aggregate in water (in gms) = (A1-A2)	A	1246.0	1247.0
4	Weight of saturated surface dry aggregate in air (in gms)	B	2007	2008
5	Weight of oven dry Aggregate (in gms)	C	1996.0	1998.0

Result :	1. Specific gravity = (C/B-A)	2.62	2.63
	2. Water Absorption in Percentage = (B-C*100/C)	0.55	0.50

Remarks: Maximum allowable Aggregate Water absorption value for Dense Graded Bituminous Macadam is 2.0%

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TEST REPORT ON SPECIFIC GRAVITY AND WATER ABSORPTION

Date. :23-3-2023

Client Name : Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92

***Contractor Name** : M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043

Project Name : Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara

Letter Reference :BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022

PMC Name : Shiprama Consulting Engineers

Technical Reference : IS 2386 (Part-4)- 1963 RA 2016, MORTH Table 500-10

Material description : Dense Graded Bituminous Macadam

Date of Reciept of Sample :23-3-2023

Date of testing :23-3-2023

TEST RESULTS

Total Wt. of Sample = 2000 gms

Sl. No.	Description	Notation	Test Result	
			Trail 1	Trail 2
1	Weight of Aggregate Suspended in water with the Basket (in gms)	A1	3723.0	3722.0
2	Weight of Empty Basket suspended in Water (in gms)	A2	2475.0	2473.0
3	Weight of Saturarted aggregate in water (in gms) = (A1-A2)	A	1248.0	1249.0
4	Weight of saturated surface dry aggregate in air (in gms)	B	2008	2009
5	Weight of oven dry Aggregate (in gms)	C	1996.5	1998.0

Result :	1. Specific gravity = (C/B-A)	2.63	2.63
	2. Water Absorption in Percentage = (B-C*100/C)	0.58	0.55

Remarks: Maximum allowable Aggregate Water absorption value for Dense Graded Bituminous Macadam is 2.0%

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TEST REPORT ON SPECIFIC GRAVITY AND WATER ABSORPTION

Date. :24-3-2023

Client Name : Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92

***Contractor Name** : M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043

Project Name : Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara

Letter Reference :BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022

PMC Name : Shiprama Consulting Engineers

Technical Reference : IS 2386 (Part-4)- 1963 RA 2016, MORTH Table 500-10

Material description : Dense Graded Bituminous Macadam

Date of Reciept of Sample :24-3-2023

Date of testing :24-3-2023

TEST RESULTS

Total Wt. of Sample = 2000 gms

Sl. No.	Description	Notation	Test Result	
			Trail 1	Trail 2
1	Weight of Aggregate Suspended in water with the Basket (in gms)	A1	3722.0	3722.0
2	Weight of Empty Basket suspended in Water (in gms)	A2	2475.0	2474.0
3	Weight of Saturarted aggregate in water (in gms) = (A1-A2)	A	1247.0	1248.0
4	Weight of saturated surface dry aggregate in air (in gms)	B	2008	2008
5	Weight of oven dry Aggregate (in gms)	C	1997.0	1998.0

Result :	1. Specific gravity = (C/B-A)	2.62	2.63
	2. Water Absorption in Percentage = (B-C*100/C)	0.55	0.50

Remarks: Maximum allowable Aggregate Water absorption value for Dense Graded Bituminous Macadam is 2.0%

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TEST REPORT ON STABILITY OF MIX

Date.	:19-3-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
PMC Name	: Shiprama Consulting Engineers
Technical Reference	: MORTH Table 500-11
Material description	: Dense Graded Bituminous Macadam
Date of Reciept of Sample	:19-3-2023
Date of testing	:19-3-2023

TEST RESULTS

Sl.No	Description	Test Result		Requirement as per MORTH (Table 500-11)
		Trail 1	Trail 2	
1	Marshal Stability, Kn	9.9	9.7	9 Kn (min)
2	Marshal flow, mm	2.64	2.72	2 – 4
3	Percent air voids in Mix	3.63	3.85	3 – 5
4	Percent voids in mineral aggregates	11.73	11.61	10-12
5	Percent voids filled with Bitumen	70.15	70.25	65 – 75
6	Density, g/cc	2.25	2.26	-

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TEST REPORT ON STABILITY OF MIX

Date.	:23-3-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara in Ward no: 06 Bytarayanapura Sub
Letter Reference	:BBMP/EE/BTP/WO/80/2022-23, Dated:22-12-2022
PMC Name	: Shiprama Consulting Engineers
Technical Reference	: MORTH Table 500-11
Material description	: Dense Graded Bituminous Macadam
Date of Reciept of Sample	:23-3-2023
Date of testing	:23-3-2023

TEST RESULTS

Sl.No	Description	Test Result		Requirement as per MORTH (Table 500-11)
		Trail 1	Trail 2	
1	Marshal Stability, Kn	9.7	9.72	9 Kn (min)
2	Marshal flow, mm	2.65	2.74	2 – 4
3	Percent air voids in Mix	3.65	3.85	3 – 5
4	Percent voids in mineral aggregates	11.71	11.55	10-12
5	Percent voids filled with Bitumen	70.18	70.4	65 – 75
6	Density, g/cc	2.26	2.25	-

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TEST REPORT ON STABILITY OF MIX

Date.	:24-3-2023
Client Name	: Executive Engineer, Bytarayanapura Division,No 2152/20,Defence Colony,Sahakara Nagara,Bangalore-92
***Contractor Name**	: M/s Sri A G Narayanaswamy, no 13 Venkateshwara Layout, Horamavu, Bengaluru-560043
Project Name	: Improvements to Roads and Drains at MCEHS Layout 1st and 2nd Phase, Sampigehalli, Chokkanahalli, Balaji Krupa Layout, Basavalingappa Nagara, Central Excise Layout, Bellahalli and Kattigenahalli in Ward no 05 and Kaveri Nagara and Shiridi Sai Nagara in Ward no: 06 Bytarayanapura Sub
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Date of Reciept of Sample	:24-3-2023
Date of testing	:24-3-2023

TEST RESULTS

Sl.No	Description	Test Result		Requirement as per MORTH (Table 500-11)
		Trail 1	Trail 2	
1	Marshal Stability, Kn	9.5	9.72	9 Kn (min)
2	Marshal flow, mm	2.55	2.74	2 – 4
3	Percent air voids in Mix	3.53	3.85	3 – 5
4	Percent voids in mineral aggregates	11.73	11.55	10-12
5	Percent voids filled with Bitumen	70.19	70.4	65 – 75
6	Density, g/cc	2.25	2.26	-

Notes:-

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